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 Title: Semiconductor Processing Methods

**VERSION WITH MARKINGS TO SHOW CHANGES MADE ACCOMPANYING
 PRELIMINARY AMENDMENT**

In the Specification

At page 1, before the "Technical Field" section, insert the following paragraph in accordance with 37 C.F.R. § 1.121(b)(1)(ii):

--RELATED PATENT DATA

This patent resulted from a continuation application of U.S. Patent Application Serial No. 09/030,618, filed February 25, 1998.--.

In the Claims

The claims have been amended as follows. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

Please delete claims 1-21.

Please add new claims 22-40.

22. (New) A semiconductor processing method comprising:
forming an antireflective material layer over a substrate;
annealing at least a portion of the antireflective material layer at a temperature of at least 550° C;
forming a layer of photoresist over the annealed antireflective material layer;
patterning the layer of photoresist; and
removing a portion of the antireflective material layer unmasked by the patterned layer of photoresist.

23. (New) The method of claim 22 wherein the layer of photoresist is formed against the antireflective material layer.

24. (New) A semiconductor processing method comprising:
forming an antireflective material layer over a substrate;
annealing the antireflective material layer at a temperature of at least 550°
C;
forming a layer of photoresist over the annealed antireflective material
layer; and
exposing portions of the layer of photoresist to radiation waves, some of
the radiation waves being attenuated by the antireflective material during the
exposing.
25. (New) The method of claim 24 wherein the attenuation comprises
absorbing radiation waves with the antireflective coating.
26. (New) The method of claim 24 wherein the layer of photoresist is
formed against the antireflective material layer.
27. (New) The method of claim 24 further comprising exposing the
antireflective material layer to a nitrogen-containing atmosphere during the
annealing.

28. (New) A semiconductor processing method comprising;
forming a solid antireflective material layer over a substrate;
altering optical properties of the antireflective material layer by annealing
the antireflective material layer at a temperature greater than or equal to about
550° C;

after altering the optical properties, forming a layer of photoresist over the
antireflective material layer; and

exposing portions of the layer of photoresist to radiation waves and
absorbing some of the radiation waves with the antireflective material.

29. (New) The method of claim 28 further comprising exposing the
antireflective material layer to an atmosphere during the altering, the atmosphere
comprising at least one of nitrogen and argon.

30. (New) The method of claim 28 wherein the optical properties which
are altered include at least one of a refractive index coefficient or an extinction
coefficient.

31. (New) The method of claim 28 further comprising:

chemical vapor depositing the antireflective material layer onto the substrate at a temperature of from about 300° C to about 400° C; and

selectively removing either the exposed or unexposed portions of the photoresist while leaving the other of the exposed and unexposed portions over the substrate.

32. (New) A semiconductor device comprising:

a substrate; and

an annealed antireflective material layer over the substrate, wherein the annealing is achieved by exposing the antireflective material layer to a temperature of at least 550° C.

33. (New) The device of claim 32 further comprising a layer of photoresist over the antireflective material.

34. (New) The device of claim 32 wherein the antireflective material layer comprises a stack of layers.

35. (New) The device of claim 32 wherein the antireflective material layer comprises a stack of layers, at least one of the stack of layers comprising silicon dioxide.

36. (New) The device of claim 32 wherein the antireflective material layer consists of one substantially homogenous layer.

37. (New) A semiconductor device comprising:

a substrate; and

an annealed antireflective material layer over the substrate, the antireflective material layer comprising oxygen, nitrogen and silicon, and wherein the annealing is achieved by exposing the antireflective material layer to a temperature of at least 550° C.

38. (New) The device of claim 37 wherein the antireflective material layer comprises from about 5% to about 37% (by atomic concentration) oxygen, from about 10% to about 35% (by atomic concentration) nitrogen, from about 50% to about 65% (by atomic concentration) silicon, and hydrogen.

39. (New) A semiconductor device comprising:

a substrate;

an annealed antireflective material layer over the substrate, and wherein the annealing is achieved by exposing the antireflective material layer to a temperature of at least 550° C; and

at least one layer of material over the antireflective material layer, wherein the at least one layer of material is at least partially transparent to radiation utilized to pattern photoresist.

Station	Time	Lat	Long	Alt	Wind	Temp	Hum	Pres	Clouds	Vis	Remarks
1	0000	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
2	0100	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
3	0200	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
4	0300	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
5	0400	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
6	0500	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
7	0600	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
8	0700	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
9	0800	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
10	0900	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
11	1000	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
12	1100	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
13	1200	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
14	1300	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
15	1400	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
16	1500	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
17	1600	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
18	1700	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
19	1800	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
20	1900	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
21	2000	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
22	2100	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
23	2200	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear
24	2300	33° 00' N	122° 00' W	1000	000	50.0	95	1013.2	000	10	Clear